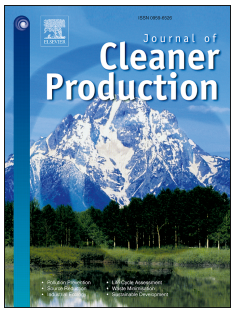

Fair Trade and Staple Foods: A Systematic Review

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Title:

Fair Trade and Staple Foods: A Systematic Review

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Reviewed methodology. Discussed findings. Drove analysis. Provided advice and feedback. Primary supervisor of the research. Edited review.

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Fair Trade and Staple Foods: A Systematic Review

Abstract:

Sustainability certification schemes such as FAIRTRADE, FLO, WFTO and FT-USA have gained increasing markets. The significant growth of the fair trade (FT) movement in the last decades draws attention to ethical consumption. FT's aim at improving the livelihoods of producers in developing countries and promotion of social change is considered a model that shows the benefits of trade to development. Although conveying a large number of publications, not all questions about the movement are explored. The literature is prolific on coffee, cacao, flowers, wine, and gold. In contrast, the engagement with staple foods – a prominent globally traded food category – seems minor. The primary objective of this review was to map the existing literature about FT and staple foods; then, to investigate the role of staple foods in the FT movement. The search strategy was designed to retrieve publications on the intersection of FT and staple foods. To date, there is no review about FT and staple foods nexus. Our systematic review addressed this gap considering FT as an alternative capable of addressing unsustainable food consumption and production impacts. Our research protocol included keywords searching across four databases, screening, and comparative analysis. From 283 documents retrieved, 49 were deemed relevant to reflect the role of staple foods in the FT movement. This systematic review discusses challenges and opportunities for the FT model to further engage with staples and recommends improvement of its environmental credentials. The present study can contribute by informing decision makers, policy makers, businesses, NGOs, producers, and consumers.

Keywords:

Ethical consumption; fair trade; staple foods; sustainability; sustainable development; sustainable consumption.

Table of Abbreviations:

CE: Circular Economy

CSR: Corporate Social Responsibility

EBSCO: Business Source Ultimate

EMF: Ellen MacArthur Foundation

FAO: Food and Agriculture Organization (of the United Nations)

FF: Fairtrade Foundation

FLO: Fairtrade Labelling Organisation

FT: Fair Trade

GMO: Genetically Modified Foods

GS: Google Scholar

IFAT: International Federation of Alternative Trade

ILO: International Labour Organization

IMF: International Monetary Fund

NGO: Non-Governmental Organization

SDG: Sustainable Development Goals

SRI: System of Rice Intensification

UNCTAD: United Nations Conference on Trade and Development

UNDP: United Nations Development Programme

USAID: United States Agency for International Development

ITC: International Trade Commission

WFTO: World Fair Trade Organization

WHS: Work, Health and Safety

WOS: Web of Science

1 Introduction

The fair trade (FT) movement significant rise in the last three decades draws attention to sustainability values and ethical consumption in society. Based on social, economic, and political concerns within developed and developing economies, the FT movement began in the mid-twentieth century by selling handcrafts to assist citizens in developing countries excluded from mainstream markets. Established to build an alternative to the conventional trade model – considered to exacerbate inequality, impoverishment, and environmental damage – FT expanded to promote an alternative form of trade for production and distribution in a range of commodities including mainly foods. As an alternative movement, the FT challenge was to avoid the pitfalls of dominant economic growth models and contribute to development inspired on sustainability and social responsibility (FF, 2001; FLO, 2003-2004; Raynolds et al., 2007; Nelson and Pound, 2009; Dragusanu et al., 2014). As stated by the Fairtrade Foundation (FF), Fairtrade "challenges the conventional model of trade and offers a progressive alternative for a sustainable future" (FF, 2001, p.13) and "changes the way trade works through better prices, decent work conditions and a fairer deal for farmers and workers in developing countries" (FLO, 2016-2017, p. 5). While the economic benefits of FT are noticeable, it is "the empowerment and capacity building nature of Fair Trade that will prove the most important" (Raynolds et al., 2004, p. 1119) for sustainable development in the longer term.

Given current and emerging environmental and climate change challenges and the need to reverse harmful effects of unsustainable consumption and production patterns (Clay et al., 2007; Akenji and Bengtsson, 2014; Brizga et al., 2014), the potential of the FT model as an alternative trade movement that prioritizes sustainable development is worthy of examination. In the FT model, a percentage of their floor price – a price that is higher than the market price – is intended to address sustainability targets such as environmental protection and socio-economic development. Given the growth of the movement and its diversification, however, the way this model is implemented under the term *fair trade* requires some clarification. Table 1 combines data about mainstream FT organisations and explains the use of terms that may otherwise lead to confusion.

Table 1.

Terminological clarification: *Fairtrade, Fair Trade, fair-trade or fair trade?*

FAIRTRADE	When written in block capitals, the term refers to the trademark used as a label on certified products from Fairtrade International.
Fairtrade International	This is the Non-Governmental Organisation that manages the FAIRTRADE label. Launched in 1997, it is headquartered in Bonn, Germany, and adopted this brand name in 2002. The organisation is a multi-stakeholder association of 23 member organisations composed of 3 producers' networks and 20 national organisations.
Fairtrade Labelling Organisation (FLO)	This is the original name of Fairtrade International. Today, it is the formal name for the entity that sets FAIRTRADE standards and provides support for producers to meet such standards.
World Fair Trade Organization (WFTO)	Launched in 2008, WFTO is a membership organisation that includes organisations and individuals from 75 countries. It was formerly called IFAT (International

	Federation of Alternative Trade), which mainly traded handcrafts. Today, WFTO trades a broader range of products based on the 10 principles of fair trade.
Fair Trade USA	An offshoot of Fairtrade International that was formed around 2011. The first letters of both terms are capitalised and followed by USA and this constitutes the organisation's brand name – which uses the organisation *Fair Trade Certified* as its certifying body. Fair Trade Certified is Fair Trade USA's label and the organisation sets its own fair trade principles.
fair trade	*Fair trade (no capitals except at the start of a sentence)* is how the overall movement is referred to in this article (instead of fair-trade). Fair trade encompasses Fairtrade, Fair Trade USA, FLO, WFTO and related organisations that abide by ethical consumption principles.

In recent decades, the increasing FT revenues suggest a positive response from consumers to production based on ethical standards, even when it requires increased prices. FT standards include: no discrimination based on race, colour, sex, religion, political opinion, national extraction or social origin; no tests for diseases prior to employment; no gender based violence; no child labour; no compulsory work; documented regular payments; a stable income to producers set above the market price; and WHS (Work, Health and Safety) conditions based on ILO Convention 155 for all workers. These are some of the FLO requirements for FT certification (updated as per May 2019). Note that Fairtrade International or FLO is the dominant in the market, to which other organisations have joined over the years. Yet, FT as a movement holds only a small share of the global international trade (Raynolds, 2017), varying "from 0.1 to 1 percent of the global trade" (Fichtl, 2007, p. 30) in their product categories, which include food, beverages, textiles, flowers, and gold. In an economic growth perspective, this small percentage generated almost €8,5 billion in revenues in 2017 (Fig. 1).

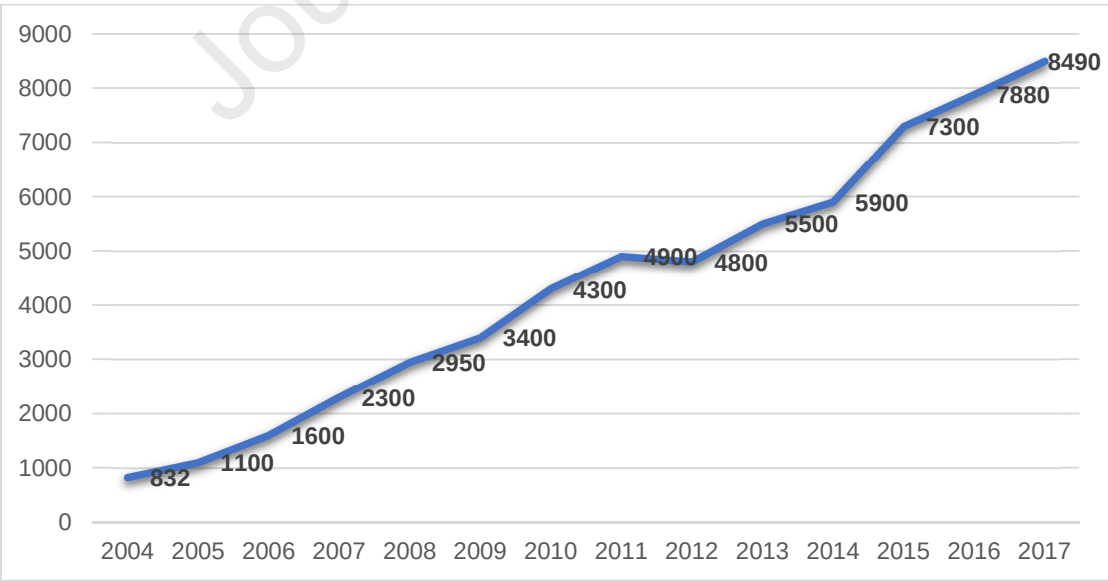

Fig. 1. Ascending trendline of FAIRTRADE revenues, in billions of Euros. Built by authors, source: FLO Reports 2003-2004 to 2017-2018.

To date, a range of discretionary products including coffee, chocolate, flowers, wine, and gold are substantially addressed in the expanding literature on FT. Considering that the majority of FT products are foods (Raynolds et al., 2004), our review analyses FT in the context of food systems. While on the one hand, FT innovative model for sustainable consumption and trade show potential to enforce changes in agricultural production, community development, food security, and environmental protection. On another hand, given the volume and value of the global market in staple foods, the apparent minor role of staples in FT schemes may challenge the movement's goals in expanding sustainable development practices. While there are plenty of review articles covering a variety of themes related to FT history, aims, and core products, to date there are no reviews on FT that cover staple foods. This systematic literature review is the first to examine the status of staple foods in the FT movement and as such, our primary objective was to identify the literature on FT and staples.

A staple food, according to the Food and Agriculture Organisation of the United Nations (FAO) "is one that is eaten regularly and in such quantities as to constitute the dominant part of the diet and supply a major proportion of energy and nutrient" of a population (FAO, 2009) and this is the definition adopted in this article. The FAO states that "just 15 crop plants provide 90 percent of the world's food energy intake, with three – rice, maize and wheat – making up two-thirds of this" (FAO, 2009). Wheat, maize and rice are the most produced cereals worldwide, according to FAO (2009). As such, those grains were key search items in this systematic review. In addition, other staples identified by FAO such as soy, oats, potato and quinoa were included, given that staple foods may vary across regions and cultures. Our study investigates the approach to staples within FT practices and published literature to identify shortcomings and advantages for sustainable development. While FT sets itself the task of promoting sustainable development and social change, it appears to concentrate on niche markets. This article also reflects on this ambiguity and apparent ethical dilemma.

1.1 Risks of mainstreaming and globalisation

While we bring attention to analyse the opportunities in expanding the range and reach of FT products, we are mindful of the risks of mainstreaming that some authors already identified. As defined by Le Mare (2008), "mainstreaming refers to both increasing markets for FT within commercial retailers like supermarkets, and the increased application of FT practices and values by conventional companies" (Le Mare, 2008, p. 1929). Redfern and Snedkern (2002) believe that mainstreaming FT can benefit the poorest and reshape conventional markets or even government policies given the movement's resonance worldwide (Redfern and Snedkern, 2002). Based on empirical results concerning coffee supply chain governance (as per MacDonald, 2007), Le Mare (2008) remarks that the mainstreaming of FT coffee resulted in empowerment of farmers. This

achievement does not imply that FT is always the good alternative, for any product, producer or developing country.

Moore (2004) raises the issue that the FT model "works" exactly because it is marginal. FT primarily aims to address production and trade inequalities, but mainstreaming FT carries the risk of dilution whereby the fairness goal becomes disconnected in the process of commercialisation (Moore, 2004; Renard, 2003; Raynolds, 2000). Le Mare (2008) believes that more research is required to analyse the effects of mainstreaming across different commodities to test how replicable is the FT model "in order to consistently enforce positive outcomes across markets" (Le Mare, 2008, p. 1929). This review is placed in this pathway, as an exploratory study to answer the research question: what is the role of staple foods in the FT movement?

Currently, "twenty commodities" are produced and distributed "according to Fairtrade International standards" (Raynolds, 2017, p. 1481) yet only two among those foods constitute staples: rice and quinoa. Therefore, staple foods represent 10% of the total range of Fairtrade International commodities, which is in contrast with the prominent role of staple foods in mainstream trade, and in people's everyday food intake (FAO, 2009). Several authors state that FT favours the implementation of global production standards (Blowfield, 1999; Barrientos, 2000; Gereffi et al., 2001; Hughes, 2001; Raynolds et al., 2004), with potential to address sustainable development aims (Murray and Raynolds, 2000), although with limitations (Barrientos, 2000; Moberg, 2005). According to Barrientos (1999), FT can be considered as "a paradox of globalisation" (Barrientos, 2000, p. 559).

Globalisation is considered here in general terms as the "greater integration of the national economies in the world" (Lloyd, 1998, p. 161). It is an "integrated international production system" (UNCTAD, 1993), which involves great advantages but also pitfalls. Globalisation has facilitated the world's production and consumption of goods and services, increased interconnectedness, and technology sharing, and lowered the prices of goods (Legarde, 2017). It is widely recognised that globalisation has intensified economic, social, and cultural relations among nations. However, it has also generated remarkable side effects such as unemployment in industrialised economies, increased inequality, and income concentration (Cornia, 2003; Cappelen and Bjorvatn, 2004), with significant negative environmental impacts (Panayotou, 2000; Wheeler, 2001). Globalisation has not worked for all and up to 3.6 billion people (or 50 percent of the global economy) are excluded from its claimed benefits, as recognised by the International Monetary Fund (Legarde, 2017). The Brexit debate in the United Kingdom, the success of Donald Trump's 2016 'America first' presidential election campaign, the vulnerabilities of international supply chains to trade wars and the COVID-19 virus may be signalling the arrival of peak globalisation. However, even if states reassert more control over the flow of goods and services across borders, no scenarios envision international trade ceasing completely. This makes fair trade schemes of continuing relevance in ensuring that ethical consumers have access to appropriately certified products.

The FT movement seems an attempt to address social and environmental values neglected by neoliberal globalisation via mainstream trade, which prioritises lowering production and input costs and prices for profit maximisation. While FT standards can be considered by some authors as an obstacle to globalisation and free markets or an "anti-globalisation" initiative (Moberg, 2005, p. 17); for others it is a "new form of globalisation" (Raynolds et al., 2007, p. 7) that is able to respond to the "competitive 'downward spiral' in labour conditions in export sectors" (Barrientos, 2000, p. 559). We see the FT initiative offering opportunities for social change in the emerging paradigm of corporate social responsibility (CSR), circular economy (CE), and new forms of governance (Lévy, 2007; Scherer and Palazzo, 2007; EMF, 2017; Murphy-Gregory, 2018). FT relies on the conventional market to differentiate their products and create an added value that might work as a CSR model despite not constituting a complete substitute of conventional market practices.

Two opposing views on trade are usually found in the literature: liberalism versus protectionism. It is of note that unrestricted trade is found less often even in countries more open to liberalism such as the USA, which practiced "domestic interventionism" (Ruggie, 1994, p. 3) on post-World War Two. Conversely, countries such as Canada, Australia, New Zealand, and European nations sought to eliminate internal trade barriers (Harris, 1989). Many other countries practice a managed trade (Bagwell and Staiger, 1988; Ethier, 1991), which means to restrict trade in some level (Kuttner, 1990). We see fair trade as a type of managed trade that integrates social and environmental dimensions. And we argue for the increase of the FT socioeconomic and environmental impacts with stringent certification requirements to enforce the promotion of sustainable development not only on the small producer's side. Greater engagement with staple foods seems a logical next step and this matters as data from the FAO already demonstrated that small farmers make up half of the world population subjected to hunger (FAO, 2012), hence excluded from globalisation potential benefits (Ribeiro-Duthie, 2019b).

In the context of general international trade, FT model may decrease the comparative advantage in price because buyers pay more for a FT-labelled product. However, this is a mutually voluntary initiative: producers choose to become fair trade certified, and consumers retain their purchasing choices. The increased value added by FT is recognised by consumers and FT foods are submitted to trade conventions equally to other goods in the marketplace. It is anticipated that the existing international trade order is likely to be recalibrated due to the Covid-19 crisis, and fair trade may face new challenges if nations seek increased protection for their markets. Despite the complexity of national and international markets and their intermediaries, which adds difficulty to the identification of suppliers' origin, the four major players in global markets for staple food products – the so-called ABCD companies – can be identified, as per Table 2, and this may shed some light to our research questions.

Table 2.

Major companies in the staple foods market.

Company	Staple Food	Country of Origin	Extra Data
Archer Daniels Midland Co.	Grains	United States	Trades over 40 million tonnes of grains and oil seeds and is the world's third largest processor of corn, wheat, cocoa, oil seed.
Bunge Group	Soybeans Wheat Maize	Netherlands	World's largest producer of soybeans. Trades 30 million tonnes of soybeans, wheat, maize and other grains.
Cargill	Grain Oilseeds Maize Poultry	United States It holds offices in 66 countries	World's largest food trader, in 2003 a volume of 50 million tonnes of cereals and oilseeds was processed. The world's largest maize trader. Process of grains and beef in Australia; and soy in Brazil.
Louis Dreyfus	Rice Soy Orange Oilseeds	France Merchandising arm is headquartered in the Netherlands	Family firm that holds 15% of global market trade, is the world's leading merchandiser of cotton and rice. It produces 1m tons of soy for animal meal.

Source: UN Food and Agriculture Organisation (FAO 2003), Murphy et al. (2012).

The fact that the major staple food producers are giant transnational corporations headquartered in developed nations is a feature that may add barriers to the FT initiative in broadening the engagement with staple foods market in favour of small producers, due to asymmetric power relations. To map and analyse FT movement interaction with staple foods, we undertook this systematic literature review, which is structured as follows: materials and methods are presented at section 2; results constitute section 3; discussion and analysis of findings are set at section 4, together with thematic analysis of the reviewed literature. The conclusion outlines the limitations and contributions of this study, also suggesting areas for future research and development.

2 Materials and methods

For the general materials' selection process, our approach was to retrieve all articles, papers, media briefings, studies, reports or published documents addressing staple foods in a fair trade model – videos or podcasts were not a target nor included in the totals. Concerning FT organisations, the present systematic review included all FT models and associated organisations that released online CSR, sustainability, annual or financial reports. Two processes ran in parallel (Fig. 2).

Our methodological approach was adapted from Cochrane's Handbook for Systematic Reviews (Higgins and Green 2011). Despite initially developed for Health, Cochrane's protocols allow wide use for conducting systematic reviews, from Engineering to Social Sciences. In addition, we considered recommendations for addressing qualitative results and synthesizing findings (Cooper and Hedges, 1993; Petticrew and Roberts, 2005).

Considering FT organisations' official releases, the first stage was collection of available reports. The second stage was screening reports to find any mention of FT certified staples, or potential evaluation of certification for staple food products. Appendix A lists all reports reviewed. The search was undertaken in March 2019.

To collect general literature, the first stage was the search across the databases Business Source Ultimate (EBSCO), Google Scholar (GS), Scopus and Web of Science (WOS). In this stage, the target was the collection of all documents including either the terms 'Fairtrade' or 'fair trade' plus one term representing staples. The parameters of staple foods were drawn from FAO list of staple foods most consumed worldwide, to which synonyms were added to form our search string.

Boolean operators were applied to narrow our search as it follows: ("Fairtrade" OR "fair trade") AND ("staple" OR "rice" OR "soy" OR "corn" OR "maize" OR "wheat" OR "flour" OR "oat" OR "potato" OR "quinoa" OR "grain"). In the case of GS, as the operators showed inaccurate results, producing tens of thousands of hits that often did not include one term of each group; we employed a combination of terms in pairs without Booleans. By including GS, we observed some new results were added to our materials.

The literature retrieved included published academic papers, reviews, book chapters, thesis, conference papers, working papers, commissioned reports, and press releases. Therefore, when we refer to literature in this article, this includes academic and grey literature. Not all documents were available online and, in some cases, contacting authors or organisations was necessary to obtain a copy of a conference paper, thesis or article. A snowball approach was adopted to broaden the search by scrutinising reference lists of the literature retrieved.

After retrieving all materials, the PRISMA method (Moher et al., 2009) was a guideline to frame the screening process and remove duplications or findings which were out of the research scope. In some cases, despite the presence of the keywords, their mention was casual and did not refer to *staples in the FT system*. Also, new duplications were identified with the screening due to names of authors misplaced, absence of author or title. The remaining literature was reviewed (n= 85) for a qualitative analysis, as they appeared related to the FT movement and staple foods to some degree. However, when submitted to further analysis, some findings were considered less relevant to our research focus (n= 56), given their thematic approach. For instance, we removed literature with focus on farm techniques; supply chain management; crop genetics; or soil improvement. Finally, the studies considered more relevant to answer our research questions were selected (n= 29) in addition to the

reports selected (n= 20). A flowchart inspired in the PRISMA method (Moher et al., 2009) depicts our methodological approach.

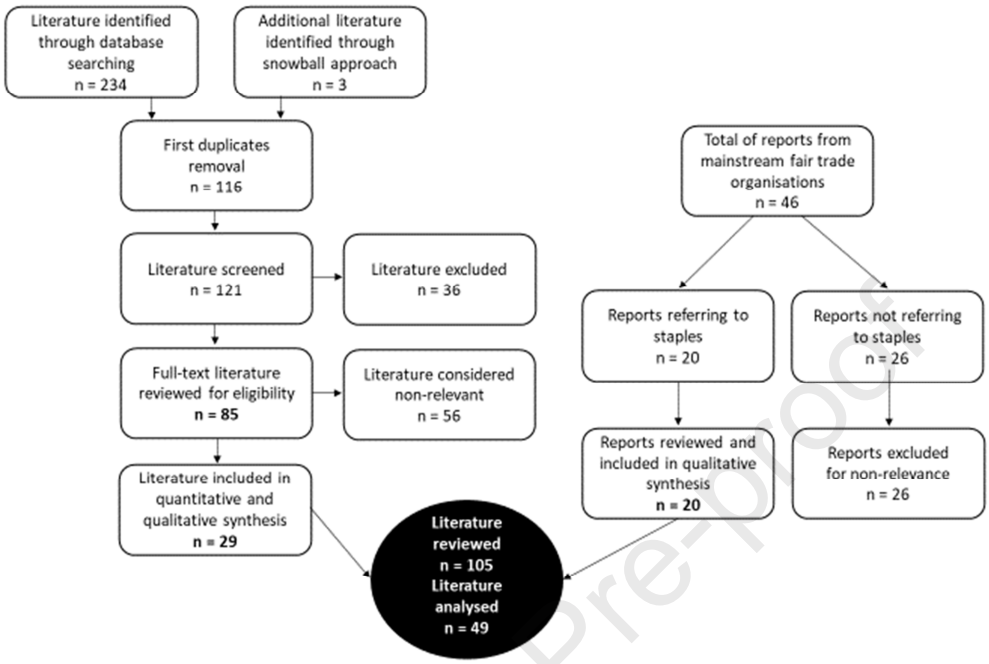

Fig. 2. Selection criteria for this systematic literature review and total findings and removals.

3 Results

From the total retrieval (283 documents including 237 literature items and 46 reports), 16 percent (or 49 documents of the total findings) were considered more relevant to answer our research questions. Out of the 85 literature records identified through our search strategy and fully reviewed, only 29 met the criterion of contributing to our understanding of the role of staple foods in the FT movement. The results included 13 peer-reviewed journal articles, five book chapters, three theses, six reports; one magazine article; and one conference paper. To these we added 20 of the FT reports retrieved. While no period was imposed, all the publications selected ranged from 2001 to 2018. Authors of the selected works were from North-American, Australian, European, Latin American and Asian universities. There were more qualitative (20) than quantitative (3) studies, with only a handful (6) combining both approaches.

The group of literature selected fall within the following disciplinary areas: (i) Agriculture and Agronomy; (ii) Environmental Sciences; (iii) Economics and Business; (iv) Social Sciences; and (v) Interdisciplinary. The methodologies and approaches employed in the findings include experimental studies; controlled observational studies; observational studies without control groups; case studies; case-control study; evidence-based comparative study; comparative studies with historical control;

cohort study; and expert opinion based on theory. In some entries, more than one approach is applied. The selected entries draw mainly on field-work research using ethnographic, survey, and interview techniques to gather data, but also statistical analysis to assess impacts. The rich diversity of methods also brings obstacles to generalise findings.

In total, nine review articles about fair trade were found through our research strategy, none of these reviews included staple foods category. Therefore, those reviews are not listed among our findings as they did not fulfill our eligibility criteria, albeit being studied to inform on FT in general. The results confirmed there is no review that cover staple foods: a gap that the present study addresses. In 2009, Nelson and Pound's meta-review concluded that "no impact studies on Fairtrade were found for cotton, sugar, tea, rice, nuts or other commodities for which there are Fairtrade standards" (Nelson and Pound, 2009, p. 5). Although that review was limited to FLO and referred to impact assessment studies commissioned by the Fairtrade Foundation, the work constitutes a source for assessing the research agenda on FT.

The outcomes of our comparative analysis structured into five thematic topics are presented in the discussion; and Table 3 outlines the relevant literature related to the role of staples in the FT movement according to our protocol. Fig. 4 synthesises the main findings collected from FT reports in the last two decades. The latter sources assisted in mapping the number and approach of the mainstream FT organisations to staple foods.

Table 3.

Selected literature: staple foods, reference, type of literature, methodological approach, and disciplinary areas of the findings.

Staple Foods	References	Type of Literature	Methods	Disciplinary Areas
Rice; Wheat; and other non-staples	Barker, 2007. The rise and predictable fall of globalized industrial agriculture. *The International Forum on Globalization* (IFG), January. San Francisco.	Report	Case Study	**i; ii; iv**
Rice	Becchetti et al., 2012. Market access, organic farming and productivity: The effects of FT affiliation on Thai farmer producer groups. *Australian Journal of Agricultural & Resource Economics* 56(1), 117-140.	Peer-review Academic Journal	Impact Assessment through Econometrics	**i; iii; iv**
Rice	Becchetti et al., 2011. Virtuous interactions in removing exclusion: The link between foreign market access and access to education. *Journal of Development Studies*, 47(9), 1431-1454.	Peer-review Academic Journal	Impact Assessment through Memorable event	**iii; iv**
Quinoa	Cáceres et al., 2007. Fair trade and quinoa from the southern Bolivian Altiplano, in: Raynolds et al. (Eds). *Fair Trade: The challenges of transforming globalization*, chapter 11. London, Routledge, 196-215.	Book chapter	Case Study; Historical Analysis; Observational Study; Comparative Analysis	**i; iii; iv**
Quinoa	Carimentrand and Ballet, 2010. When fair trade increases unfairness: The case of quinoa from Bolivia. *FREE (Fonds pour la Recherche en Ethic Economique) Cahier* (5).	Report	Case Study	**iii; iv**
Quinoa	Carimentrand et al., 2015. Quinoa trade in Andean countries: Opportunities and challenges for family, in: *State of the Art Report on Quinoa in the World in 2013*, 330-342.	Report chapter	Case Studies Review; Observational Study; Comparative Analysis	**ii; iii; iv**
Rice	Carlisle, 2016. The Terrace Keepers. *Stanford Social Innovation Review*, 14(4), 13-14.	Periodical	Case Study	**iii; iv**
Potato	Colantuoni et al., 2016. Heterogeneous Preferences for Domestic Fresh Produce: Evidence from German and Italian early potato markets. *Agribusiness*, 32(4), 512-530.	Peer-review Academic Journal	Discrete Choice Experiment	**i; iii; iv**
Staples in general	Howell, 2007. Sustainable consumption and global trade: Complementary or contradictory? *International Journal of Interdisciplinary Social Sciences*, 1(5), 137-144.	Peer-review Academic Journal	Desk-based Eco-Footprint Analysis	**iv; v**
Rice	Jolly and Arora, 2014. Institutional work and poverty reduction: Case of smallholder cultivation in Northern India. *Academy of Management Annual Meeting Proceedings*. Vol. 2014(1).	Conference paper	Case Study	**iv; v**
Quinoa	Lunardi, 2017. *Playing Fair: How "Alternative" fair trade and organic quinoa markets in Bolivia affect producer livelihoods*. Doctoral thesis, University of Ottawa, Ontario, CA.	Thesis	Case Study; Observational Study (Ethnographic)	**iv; v**

Quinoa; and other non-staples	Lyon, 2015. Fair trade and indigenous communities in Latin America, in: Raynolds and Bennett (Eds*). Handbook of Research on Fair Trade*, chapter 24. Chetelham Glos, Edward Elgar Publishing, 422-440.	Book chapter	Desk-based Comparative Analysis	**ii; iv**
Rice	Makita and Tsuruta, 2017. Social movements and commercial certification: A case from Thailand, in: Makita and Tsuruta (Eds). *Fair trade and organic initiatives in Asian agriculture*. London, Routledge, 74-104.	Book chapter	Case Study	**i; ii; iii; iv**
Rice; and other non-staples	Nelson et al., 2010. Climate change, agriculture and Fairtrade: Identifying the challenges and opportunities. *Natural Resources Institute (NRI) Working paper*. University of Greenwich, Kent.	Report	Desk-based Analysis	**ii; iii**
Quinoa	Ofstehage, 2012. The construction of an alternative quinoa economy: Balancing solidarity, household needs, and profit in San Agustín, Bolivia. *Agriculture and Human Values*, 29, 441-454.	Peer-review Academic Journal	Case Study; Observational Study (Ethnographic)	**i; iii; iv**
Rice	Panyakul, 2012. Climate change adaptation through agro-social enterprise: Green Net's experiences in Thailand. *Asian Journal of Environment and Disaster Management*, 4(4), 1-16.	Peer-review Academic Journal	Case Study; Observational Study; Action Research	**i; ii; v**
Soy	Potts et al., 2014. Soybean market, in: *The State of Sustainability Initiatives Review*, 253-274.	Report chapter	Desk-based Comparative Data Analysis	**i; iii; v**
Rice	Sekimoto and Augustin-Jean, 2012. An export niche in the Philippines: The commodification of a speciality rice in Ifugao Province, in: *Geographical Indications and International Agricultural Trade*. Palgrave Macmillan, London, 181-203.	Book chapter	Case Study	**ii; iii; iv; v**
Rice	Sharma et al, 2018. Comparison of conventional and fair trade systems on dimensions of sustainability: A study of basmati rice procurement in India. *International Journal of Innovation and Sustainable Development*, 12(4), 446-468.	Peer-review Academic Journal	Factor Analysis; Case-Control Study; Comparative Analysis	**i; ii; iii**
Rice	Smith, 2014. Cross-border innovation in South–North fair trade supply chains: The opportunities and problems of integrating fair trade governance into Northern public procurement, in: Vazquez-Brust et al. (Eds). *Collaboration for sustainability and innovation: A role for sustainability driven by the Global South?* Greening of Industry Networks Studies, 3. Springer, Dordrecht, 87-105.	Book chapter	Case Study; Evidence-based Observational Study	**i; iii; iv**
Rice	Sondh, 2018. *Is Fairtrade leading to sustainable changes in the value chain?* MSc Dissertation, Wageningen University, The Netherlands.	Thesis	Case Study	**iii**
Soy; and other non-staples	Tayleur et al., 2017. Global coverage of agricultural sustainability standards, and their role in conserving biodiversity. *Conservation Letters*,10(5), 610-618.	Peer-review Academic Journal	Environmental and Certification Comparative Analysis	**i; ii; v**
Rice	Thavat, 2011. The tyranny of taste: The case of organic rice in Cambodia. *Asia Pacific Viewpoint*, 52(3), 285-298.	Peer-review Academic Journal	Case Control Study; Controlled Observational Study (Ethnographic)	**i; iii; iv**

Quinoa	Trinley, 2017. *From grassroots to global: unintended consequences of a Bolivian quinoa economy*. Master's Thesis, DePaul University, Chicago.	Thesis	Comparative Historical Analysis	**i; ii; iii; iv**
Rice	Udomkit and Winnett, 2002. Fair trade in organic rice: A case study from Thailand. *Small Enterprise Development* 13(3), 45-53.	Peer-review Academic Journal	Experimental with Control Group; Evidence-based Comparative Analysis	**i; ii; iii; iv**
Rice	Van den Broeck et al., 2017. Rice farmers' preferences for fairtrade contracting in Benin: Evidence from a discrete choice experiment. *Journal of Cleaner Production*. Nov, 165, 846-854.	Peer-review Academic Journal	Choice Experiment using Econometrics	**iii; iv**
Rice; and other non-staples	Vent et al., 2015. Market Incentives for Ecofriendly SRI Rice Production in Cambodia, in: *Shades of Green: Multi-stakeholder initiatives to reduce the environmental footprint of commercial agriculture*. Greening Export Agriculture in East and South East Asia, 73-80.	Report	Case Study; Evidence-based Comparative Analysis	**i; ii; iii**
Quinoa	Winkel et al., 2012. The Sustainability of quinoa production in Southern Bolivia: From misrepresentations to questionable solutions. Comments on Jacobsen (2011, J. Agron. Crop Sci. 197: 390-399). *Journal of Agronomy and Crop Science*, 198(4), 314-319.	Peer-review Academic Journal	Comparative Analysis	**i; ii; iii; iv**
Soy	Wilkinson, 2011. From fair trade to responsible soy: Social movements and the qualification of agrofood markets. *Environment and Planning A*, 43(9), 2012-2026.	Peer-review Academic Journal	Comparative Analysis	**ii; iv**

Throughout the review, a large number of FT organisations or cooperatives dealing with staple foods were mentioned (a list of all organisations found is available as supplementary data upon request). The focus on specific commodities stands out in the literature selected (Table 2). And the staple food products addressed by the 29 selected literature items are represented in Fig. 3. The staple foods appearing in these studies originate mainly from Latin America (Bolivia, Brazil, Ecuador, Chile, Peru), Asia (Cambodia, India, Philippines, Thailand, Vietnam) and Africa (Benin, Malawi, Mali), but some, like potatoes, are produced in Europe (Italy and Germany). Most of the studies are context specific, with diverse methodological approach, which is an obstacle to generalising the findings. The overall data demonstrates an absence of substantial analysis about staple foods as a category in the FT system, where those food products seem to play a minor role, contrasting with the major players on staple foods worldwide (Table 2).

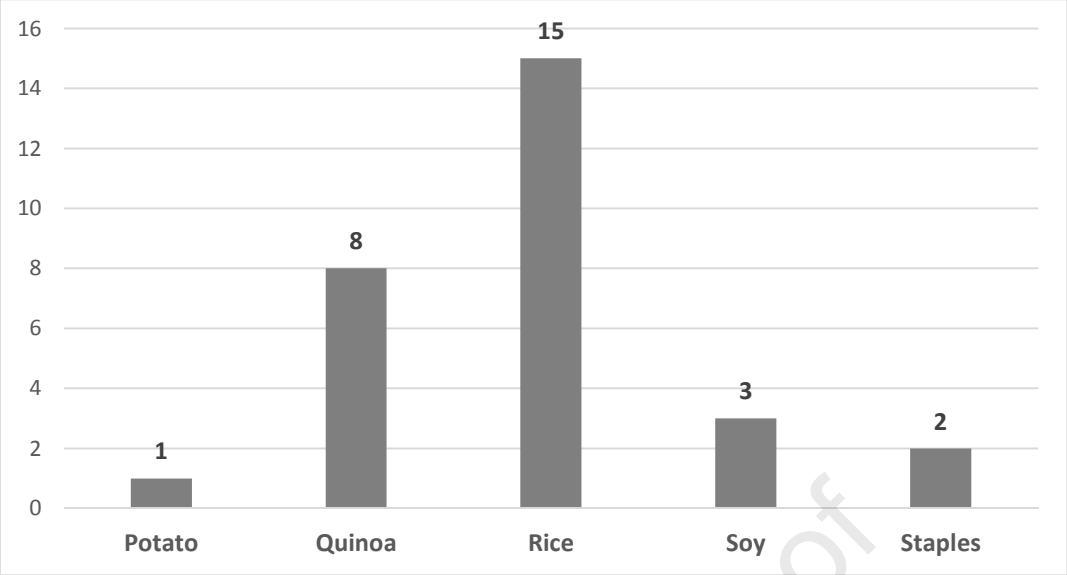

Fig. 3. Number of selected literature items addressing the respective staples within a FT model.

Turning to the 20 FT organisations' business reports in our sample, we mapped the variety of staples within FT schemes over the years and assessed the FT movement's approach to staple foods. The results are set out in Fig. 4. It should be noted that the terms "staples", "grains", "maize" and "oats" were also identified in these reports though in the context of companies, products, and meals rather than related to FT certification. Hence, they were not included in this qualitative synthesis (Fig. 4).

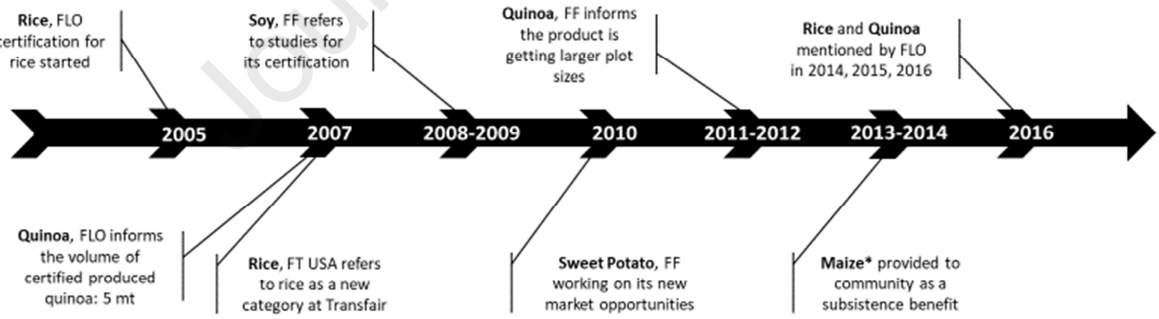

Fig. 4. Timeline compiling FT organisations' reference and approach to staple foods. Synthesised by authors, source: FLO; FF; WFTO; and FT USA reports. *No indication that maize was FT certified.

Overall, the results indicate that studies on FT and staple foods are exiguous. Not only are there few staples included in FT schemes (Fig. 2), there is no theorized explanation as to why this is so among the studies retrieved.

4 Discussion

Although staple foods are not core FT products, some are included in the FT system as our analysis confirmed. One FF report details prospective studies on the inclusion of soybeans in the scheme, but there was no reference to it in subsequent reports (Fig. 4). Possible barriers to engagement with soy in the FT model, as indicated in the reviewed literature, can be issues of "reduced opportunities for direct branding through consumer-facing label" (Potts et al., 2014, p. 2); its use as an intermediary input such as livestock feed; environmental standards (organic production is prioritized within FT schemes); forest protection (largest soy producers are in the Amazon region); and market demand where China is the main purchaser and its requirements for production practices are already in place (Potts et al., 2014). Our review also indicated previous attempts to include other staples such as sweet potato in the FT model. However, such food product was not mentioned in subsequent reports, what seems indicative that their inclusion did not proceed.

Among the FT staple food products, rice is the most well-known, followed closely by quinoa. Van Den Broeck et al. (2017) believe that "rice is an emerging FT product" (Van Den Broeck et al., 2017, 847) and those authors see the expansion towards certification of staple food products as part of FLO current strategy (Van Den Broeck et al., 2017). While rice is commonly considered a basic (staple) food, our analysis reveals that rice is also considered a high-end product. The aroma and flavour characteristics of some rice types grown in Malawi and the Philippines have facilitated FT certification (Carlisle, 2016; Smith, 2014). The inclusion of speciality rice in FT accords with other existing successful well-known FT commodities with speciality characteristics such as coffee, cocoa, and wine. This reinforces the notion that FT is a niche, even luxury, market.

Quinoa is an Andean cereal named by some consumers as a 'super grain' for its high nutritional value. The international market for quinoa has expanded since the 1980s. Whereas rice is clearly a staple food, quinoa is a regional staple, and in Fairtrade reports, rice and quinoa sales are always presented together, therefore quinoa was included in this investigation about staple foods in the FT initiative, together with corn, maize, soy, potato, oats, and wheat.

These findings raise additional research questions about FT strategy and staple foods: why are staple foods not broadly included in the FT model? Is FT destined to remain a mere niche rather than mainstream market strategy? While it is likely that the FT certification of products follows some strategic rationale, it is not clear which of its identified priorities – sustainable development, poverty alleviation and addressing North-South market inequalities – take precedence.

Our aim in reviewing the FT reports and the academic literature on FT and staples was to determine the status of this sector within the movement. Our study provides an evidence base for understanding the nexus between FT and staple foods and raises a range of questions regarding the FT movement's aspirations, strategic focus, governance, reach, and environmental impact. To facilitate the discussion of those identified aspects, we structured our analysis into five interrelated thematic topics: supply, demand, governance, sustainability, and globalisation. These discussions propel a research agenda to

better understand the shortcomings, advantages, and potential of the FT movement in engaging more intensively with staple foods regarding sustainable development aims.

4.1 Supply side considerations

Our literature review highlights a number of explanations for why producers of three staples (rice, quinoa and soy) find it difficult to obtain FT certification. Explanations offered included that (i) producers lack capacity due to low literacy, numeracy, and marketing skills related to procurement, logistics, planning, and sales; (ii) NGOs can be inefficient and add an additional layer of bureaucracy that increases costs (Lunardi, 2017; Smith, 2014); and (iii) the absence of government support can limit access to credit, processing facilities, and seed storage (Makita and Tsuruta 2017; Trinley 2017; Lunardi 2017; Vent et al., 2015; Lyon 2015; Carimentrand et al., 2015; Udomkit and Winnett, 2002).
A factor that may affect prices of raw materials is government policy of subsides (or their removal – that may be required by trade agreements) driving the production with effects on availability and consequently, prices. As prices are subject to economic principles of supply and demand, this will affect inputs for staples and non-staples alike. Weather is another important factor that may increase or reduce the availability of raw materials in the market. To exemplify, heat waves are phenomena that can affect production and, as a result, price dynamics[1]. Therefore, climate change should be considered, as well as studies to address remediation and prevention of its adverse effects. Initiatives that look at reducing environmental impacts are necessary steps.
Supply side explanations, however, do not account for how the FT movement has overcome such obstacles in the non-staples sectors. While it is possible that coffee, cocoa and tea producers would benefit enormously from capacity building, NGO efficiency and government assistance, these factors are not clarified to the establishment of FT certification in these discretionary commodities. Are there features of staples production that are significantly different from non-staples production that might explain their limited FT presence? Possible differences include the following:

- The difficulty of obtaining a reasonable price premium for staples compared to non-staples;
- A lack of awareness and expertise among local FT representatives, certifiers, and consultants about the potential of staples;
- A set of technical factors that make it difficult to grow the required volume of a staple crop to make it viable to meet international markets demand;
- Difficulties in setting a higher floor price on basic foodstuffs as profits on staples come from large-scale sales unlike discretionary products.

[1] Case studies report a heat wave in Russia that affected wheat production leading world prices to increase by 40% in 1988. A decade later, with optimal weather conditions, Russia's production returned to capacity and world prices went down by 15% (Karlin, 2018; Macrotrends, 2020). This is an example of the volatilities in the staple foods market. Fair trade standards propose to protect producers from volatilities by setting a floor price above the market price (Dragusanu et al., 2014), which is an important selling point of fair trade for producers.

Such factors, individually or collectively, may explain why staples are not the focus of the FT schemes. The major way FT does this for coffee, cocoa, and tea is to brand these otherwise 'like products' as preferable because they return a fair wage to producers and encourage more democratic and sustainable forms of production. The examples in our study are suggestive of how this could be done with regard to staples like rice, quinoa, and soy, but more research is required to examine if there are specific issues in branding staples as FT certified compared to non-staple discretionary food products.

It may be that FT is partially a victim of its own success in that small producers (and consumers) have come to view it as focusing almost exclusively on discretionary foods and that staples like rice, maize, wheat and potatoes are to be produced for domestic, not international, consumption. Such a perception might be associated to a lack of expertise by local FT practitioners in non-traditional FT products like rice, quinoa and soy – whose markets are dominated by large enterprises. It would thus be interesting to research initiatives where producers of maize, oats, potato, wheat, and other staples explored the FT option but ultimately did not pursue it. This aspect would be better reflected through interviews with FT practitioners or producers, a future step in our research agenda. Such study could enlighten on the specifics or technical production difficulties that producers experienced in marketing food commodities such as staples.

4.2 Demand side considerations

Turning to the demand side, some explanations as to why consumers are not apparently demanding FT staples in the same way as FT coffee, chocolate, and wine include:

- Consumer willingness to pay a price premium is indeed limited to discretionary goods;
- An actual absence of supply giving rise to an absence of demand;
- The 'invisibility' of many staples as components of processed foodstuffs.

On the consumer side, one possible explanation is the different pattern in consumer behaviour when purchasing speciality goods like coffee, chocolate and wine in comparison to necessities like rice, corn, oats and wheat. It may be that consumers are prepared to pay a price premium for an occasional and non-necessary purchase whereas they are not when it comes to purchases of everyday goods which are regarded as non-negotiable basic requirements that may compromise their income in the long-run. Investigate the way FT movement brands and advertises itself in consumer markets can shed light to the way consumers are conditioned to think about FT: referring to discretionary purchases and not staples? As it is known, FT is a premium product that does not necessarily aim to compete with normal market products but to challenge the conventional trade practices. The premium price is a hallmark of FT approach designed to support producers and their communities. The added value of FT increases the value of the product.

Studies have shown that smaller margins between a premium product and market product can reduce the sales volume of the premium product (Shapiro, 1983; Anderson et al., 2003; Bhattacharya and Sen, 2004; Schollenberg, 2012). The effects of increased premium price on how consumers value the experience and the product are well established in the beverage sector for discretionary goods such as wine (Florkowsji et al., 2008) and coffee; the latter being FT's flagship product. Little is known about staples, but from our systematic review, Carlisle (2016) indicates a similar approach to an heirloom variety of FT certified rice: the "grain's unique taste and its arsenic-free, high-antioxidant content" being considered a key selling point. In this case, the higher price was associated with a lower volume of production.

A range of issues around the structure and operation of the FT market can be anticipated as militating against sales in FT staples. The lack of supply of FT staples would induce a lack of demand since consumers cannot 'vote with their wallets' and purchase what is not available. More importantly, perhaps, it could be that the FT system depends on selling goods at a significant price mark-up in order to make the entire supply chain viable and such a mark-up is not viable for staple goods, unless a high volume sales is assured. To secure high volume sales, small producers have to be well organised, and usually cooperatives can better deliver this level of procurement and logistics skills. It would be very important to research whether this is a (perceived) limitation of the mechanism and how it can be overcome – since FT appears to be capable of making a major contribution to meeting the SDGs with special regard to small producers. Finally, the "invisibility" of staples as ingredients in many processed foods also needs to be considered, given that an important buyer of staples is the food processing industry. When people buy bread made from wheat, they usually have no idea of the complex supply chain that links their purchase to the welfare of producers thousands of miles away. This invisibility and disconnection from the producer and environmental effects of production may add obstacles to marketing strategies of the FT movement.

4.3 Governance considerations

In regard to FT governance, the reasons for the lack of FT staples may include:

- Past experience within the FT movement linked to unsuccessful trials;
- A need for strategic focus on what is already working;
- A lack of resources and risk appetite to undertake new initiatives;
- Movement domination by non-staple producers and consumers;
- Consumer willingness to pay a higher price for staples insufficiently investigated.

It is unclear in the literature what steps the FT movement has taken to engage with staples. One reason to suspect limited engagement is that staples have not been identified as a separate category within the FT system, which instead appears to engage in a commodity-by-commodity analysis of its operations. While this approach is understandable given the specificity of the factors influencing supply and

demand, it could be that considerable effort has been invested into recruiting staples producers with only very limited success in rice, quinoa, and soy. Interviews with country-level FT movement organisers and consultants would help to answer this topic.

It is also possible that the FT movement is cognisant of the staples issue but has chosen to focus on the tried and tested discretionary goods for strategic reasons. A rationale may be that expanding the FT consumption of coffee, tea, chocolate, and wine is a means to generating wider awareness of the system to create future opportunities for other products. These strategic issues raise, in turn, the way in which the FT movement is governed, and decisions made. Raynolds (2016) highlights that the FT movement's governance arrangements have changed since its inception and it is interesting to reflect on the intersection between FT governance and its strategic plans and focus. Does the organisation have the capacity for deep self-reflection about its overall vision and purpose or is it more reactive to current interests represented by its board?

How much scope is there for mainstreaming FT and in which direction: expanding the range or boosting the existing commodities? This must be a constant question for any successful business: specialise or diversify? If mainstreaming FT is the answer, authors such as Renard (2003), Moore (2004), Redfern and Snedkern (2002) have stressed the risks. The capacity of the movement for self-criticism is important and it can be observed in the claim for increasing impact assessment studies of the system. Many of the existing impact assessment studies are the ones commissioned by FT organisations. Thus, they are not free of bias and this constitutes an important avenue for the FT research agenda. The capacity of the movement to address criticisms and renew its approach is important for the future of FT, a scheme that defines itself as promoting social change. Within our reviewed literature some key points of concern were identified including the complexity of standards; intensive use of intermediaries (NGOs); the limited responses to climate change, environmental protection, and food security.

4.4 Sustainability considerations

We observe that the socioeconomic dimensions are some steps ahead of the environmental actions in our findings. This must reflect that FT's engagement with the environment has been piecemeal until recently and the organisation has placed more emphasis on socioeconomic than environmental impacts in their requirements for certification. We note, however, that this may be about to change following recent changes to Fairtrade International's standards (on April 2019) that relate to the environmental performance of small producers. Therefore, there is potential for the FT movement to boost their environmental performance. We see the establishment of targets and tangible indicators considering local contexts as a way of securing change and stimulating creative strategies to improve protection to the environment.

Drawing from our findings, Tayleur et al. (2017) recommends that areas in need of poverty alleviation projects are matched to areas targeted for biodiversity conservation through certification, based on

their proposed tools for geographical location. In other studies reviewed, environmentally positive impacts of FT were identified in its support for organic production and the training of farmers in environmentally friendly techniques. Socioeconomic benefits associated with these changes were also identified, which included a guaranteed income for small farmers, capacity building, recognition of small producers' work, opportunities to acquire and share knowledge, and securing access to education for the children of small scale producers (Udomkit and Winnet, 2002; Barker, 2007; Becchetti et al., 2011; Lyon, 2015; Carimentrand et al., 2015; Vent et al., 2015; Carlisle, 2016).

As observed, income is the most common dependent variable to assess the impact of FT and it is treated independently from the movement's other benefits. When quantitative studies are employed, it is important to pay close attention to the dependent variable. Such a limited dependent variable is no longer appropriate in the new era of the Anthropocene and as the world makes a just transition to the sustainability paradigm (Gale, 2019). The early seeds of such a paradigm shift are beginning to sprout with the emphasis to responsible production and consumption (Akenji and Bengtsson, 2014); adoption of CE (Xavier et al., 2019); technology transfer; environmental governance (Murphy-Gregory, 2018); and the use of renewables in developing countries. Therefore, when attempting to assess whether a project, process, or practice is delivering sustainability actions, analysts need to contextualise any income effects within a broader set of differently measured social and environmental benefits (Schmelzer, 2006). Hence, focus on shared value or sustainability value would be more appropriate (Porter and Kramer, 2011).

A noteworthy environmental benefit of FT and staple foods in comparison to other FT products was identified in the study by Makita and Tsuruta (2017). This study highlighted a successful initiative in Thailand to connect urban consumers to rural farmers by making household food waste available for agricultural compost production. The example demonstrates some potential for FT to support the transition towards a CE paradigm – which entails the use of waste as an input for another stage of the food production when the desirable avoidance of waste is impossible. Applied to food systems, CE principles highlight the potential for food redistribution; and food waste use for compost or energy generation (EMF, 2017; Ribeiro-Duthie, 2019a). The incentive to reduce the costs through environmentally friendly techniques as, for instance, the use of solar powered pumps for irrigation is another valid incentive for a cleaner production. Biogas digestors and the production of biochar from waste have potential to be used where suitable, and that adds value to production process and reduces waste and environmental impact – another example that can be aligned to the principles of CE.

Nelson et al. (2010) argue that climate change poses a variety of challenges and opportunities for Fairtrade and they identify a number of potential impacts that the organisation and its producers should focus on. These include producer standards, trader standards, capacity building and networking, policy, advocacy governance and research (Nelson et al., 2010). Vent et al. (2015) discuss the importance of rice within the Cambodian diet and the efforts made to increase rice production for food security (subsistence) and for exports by using the agroecological methodology of

System of Rice Intensification (SRI) to meet, among other aims, organic and FT requirements. The relevance of SRI is that rice is the primary user of water, and the "main source of methane emissions" in Cambodia (Vent et al., 2015, p. 73-74); in addition, climate change and other environmental issues affect rice production. As there are many negative effects from conventional rice production on producer's health and the environment, SRI could be an example of how FT applied to staple foods could address climate change even though SRI is not an exclusive FT practice.

We see the example of Cambodia's SRI, and Thailand's cultural dimensions integrated to a FT certification system showing that stringency regarding environmental standards can bring robust results when local contexts are recognised and integrated into the FT model. Disposal and reuse of waste, gas and energy generation are existing practices within food systems that could improve FT's environmental footprint, which also addresses the so claimed CE principles. The adoption of initiatives as such would allow FT producers, and the movement, to increase their environmental credentials.

4.5 Globalisation considerations

While the alternative trade model aims at promoting sustainable development, it also provides an opportunity to address the globalisation pitfalls of intensive production associated with lower prices and its impacts to increase inequality. This is thoroughly discussed in the literature concerning quinoa (Carimentrand and Ballet, 2010; Carimentrand et al., 2015; Lyon, 2015; Trinley, 2017; Lunardi, 2017). Sharma et al. (2018) note that the globalisation of food chains has been "unfair for the grass root rural livelihoods" (Sharma et al., 2018, p. 450-451), harming the environment and being unsustainable in the long run. Recognising the sustainable development potential of FT, Sharma et al. (2018) studied FT's association with sustainability parameters using a sample of rice farmers from India. They found that "farmers with FT systems score significantly higher when compared with farmers following conventional system on all indicators of sustainability dimensions except vulnerability" (Sharma et al., 2018, p. 464). For farmers from Ifugao Province, turning Tinawon rice into an export commodity brought "implications for social organization, local development, and sustainability" (Sekimoto and Augustin-Jean, 2010, p. 182).

Some studies, such as Wilkinson (2011), argue in favour of less dependence on South-North trade as a means of economic advancement for peasant farmers. Makita and Tsuruta (2017) identify opportunities within Asia for a new kind of globalisation that matches organic consumers to organic producers. This could engage produces in countries like China, India, Thailand, Indonesia, the Philippines, and Vietnam which practice "large scale cultivation for export" (Makita and Tsuruta, 2017, p. 99) with consumers in Japan, South Korea, Taiwan, Hong Kong, and Singapore that are consumers of organic production (Makita and Tsuruta, 2017). Likewise, Winkel et al. (2012) suggest that globalisation of the quinoa market is driving change towards research cooperation: "the

increasing competition in the international quinoa market requires a shift towards more ethical economic relationships with exporters and ethical research cooperation with quinoa producers" (Winkel et al., 2012, p. 318). The effects of globalisation over producers, communities and the environment with quinoa's peak in market and exports volume are a key lesson learnt from the staples group of commodities, even though not only related to FT effects. From those studies it is of note the key role FT system can play to address unsustainable consumption and production practices.

This initial exploratory research has pointed to compelling questions. What are the identifiable determinants of the FT choice of products? Are there past unsuccessful attempts to include staple foods in the FT system that are non-reported? Is the choice of products related to FT's governance strategies? These aspects constitute future directions to be explored in further studies using other methodological approaches.

5 Conclusions

While there is a well-established link between a cup of fair trade certified coffee and the social change it encompasses for *consumers voting with their wallets*, how does the FT movement approach staple foods to which a greater number of consumers are exposed to? What does the existing literature and the main FT organisations report about FT and staple foods nexus? Our systematic review confirms the scarcity of publications, and the need for broader understanding of the rationale of the FT system in selecting their products. This systematic review demonstrates that while 29 studies and 20 reports mention FT staples, only a handful analyse staple foods features within the FT model. As this article focused on FT and staples, only literature relating to FT staple foods was reviewed.

The findings from this review demonstrate a diversity of methodologies and disciplinary areas that make it almost impossible to generalise data – which can be seen as a limitation of the review's outcomes. Notwithstanding, they pave the road as a preliminary study on the relations of staples and the FT movement. If there is a role for staple foods within the FT model, it is not clearly stated nor evident in the literature or in the mainstream FT organisations' reports. There is risk of bias when interpreting our findings as scarce. This may reflect researchers' expectation of having results conveying FT and staples with the same weight staple foods carry in non-FT literature; or in a larger number as the existing prolific literature about fair trade in general. Although receiving great attention in publications, not all questions about the FT movement are explored and this review contributes analysing FT from an unexplored angle. Another risk of bias is to interpret that the number of findings in the literature reflect a low number of fair trade initiatives related to staples. As noted, many types of organisations handling staple foods in a FT model were mentioned in the selected literature.

This review has also sought to contribute by analysing the obstacles and opportunities for broadening the range and reach of FT system via the inclusion of FT models for staple foods to further FT goals of contributing towards sustainable development. We recognise that there could be many reasons for

the lack of emphasis on staples, however as it stands, the literature tells us very little about what those reasons are and whether they are linked to a lack of FT strategy or to structural features and dynamics of staples production and distribution.

While there are hints to be gleaned about the general relationship between FT and staple foods in the studies we analysed in this article, it is unclear whether these are country or commodity specific. It appears necessary to step beyond the bounds of the literature and directly engage with the FT movement itself. As a follow up study, we intend to interview FT producers, practitioners and experts to further explore the relationship between FT and staples. It is important to undertake more research to answer the raised issues since there are good reasons to believe that FT constitutes an alternative model of trade that is better adapted to delivering the SDGs than the current energy and input-intensive industrial global market exchange model. We believe that FT can make a more significant contribution to sustainable development if the perceived and real barriers regarding staples are overcome. This systematic review mapped out the state of knowledge on FT certified staple foods and it can contribute by informing decision makers, policy makers, businesses interested in sustainable development practices, NGO's, producers, and consumers.

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7. References

Akenji, L., Bengtsson, M., 2014. Making sustainable consumption and production the core of sustainable development goals. Sustainability 6 (2), 513-529.

Anderson, K., Norman, D., Wittwer, G., 2003. Globalisation of the world's wine markets. World Econ. 26 (5), 659-687. [10.1111/1467-9701.00541]

Bagwell, K., Staiger, R. W., 1988. A theory of managed trade (No. w2756). National Bureau of Economic Research.

Barker, D., 2007, January. The rise and predictable fall of globalized industrial agriculture. San Francisco: International Forum on Globalization.

Barrientos S., 2000. Globalization and ethical trade: assessing the implications for development. J. Int. Dev. 12 (4), 559-570. [https://doi.org/10.1002/1099-1328(200005)12:4<559::AID-JID691>3.0.CO;2-G]

Becchetti et al., 2011. Virtuous interactions in removing exclusion: the link between foreign market access and access to education. J. Dev. Stud. 47 (9), 1431-1454.
Bhattacharya, C. B., Sen, S., 2004. Doing better at doing good: when, why, and how consumers respond to corporate social initiatives. Calif. Manage. Rev. 47 (1), 9-24. [ttps://doi.org/10.2307/41166284]
Blowfield, M., 1999. Ethical trade: a review of developments and issues. Third World Q. 20, 753-770.
Brizga, J., Mishchuk, Z., Golubovska-Onisimova, A., 2014. Sustainable consumption and production governance in countries in transition. J. Clen. Prod. 63, 45-53.
Cappelen, A. W., Bjorvatn, K., 2004. Globalisation, inequality and redistribution. Discussion paper 15.
Carimentrand, A., Baudoin A., Lacroix P. et al., 2015. Quinoa trade in Andean countries: opportunities and challenges for family. State of the art report on quinoa in the world in 2013, 330-342.
Carimentrand, A., Ballet, J., 2010. When fair trade increases unfairness: the case of quinoa from Bolivia. Cahier FREE 5.
Carlisle, L., 2016. The terrace keepers. Stanf Soc Innov Rev 14 (4), 13-14.
Clay, S., Gibson, D., Ward, J., 2007. Sustainability Victoria: influencing resource use, towards zero waste and sustainable production and consumption. J. Clean. Prod. 15 (8), 782-786.
Cooper, H., Hedges, L. V., 1993. The handbook of research synthesis. Russell Sage Foundation.
Cornia, G. A., 2003. The impact of liberalisation and globalisation on within-country income inequality. CESifo Economic Studies 49 (4), 581-616.
Colantuoni, F., Cicia, G., Del Giudice, T. et al., 2016. Heterogeneous preferences for domestic fresh produce: evidence from German and Italian early potato markets. Agribusiness 32 (4), 512-530.
Dragusanu, R., Giovannucci, D., Nathan, N., 2014. The economics of FT. J. Econ. Perspect. 28 (3), 217-236. [DOI: 10.1257/jep.28.3.217]
Potts, J., Lynch, M., Wilkings, A., et al., 2014. Soybean market, in: The state of sustainability initiatives review, 253-274.
EMF, Ellen MacArthur Foundation, 2017. Circular Economy in action. Ellen MacArthur Foundation: Cowes, UK.
Englund, O., Berndes, G., 2015. How do sustainability standards consider biodiversity? Wiley Interdisciplinary Reviews: Energy and Environment 4, 26-50.
Ethier, W. J., 1991. The economics and political economy of managed trade, in: Markets and Politicians. Springer, 283-306.
FAO, Food and Agriculture Organisation of the United Nations, 2012. The state of food insecurity in the world in 2012. Economic growth is necessary but not sufficient to accelerate reduction of hunger and malnutrition. FAO, Rome.
FAO, Food and Agriculture Organisation of the United Nations, 2009. Staple Foods: What do people eat? http://www.fao.org/docrep ? (Last accessed on 21 February 2019).
FAO, Food and Agriculture Organisation of the United Nations, 2003. Financing normal levels of commercial imports of basic foodstuffs. FAO, Rome. http://www.fao.org/3/y5109e/y5109e00.htm#Contents ? (Last accessed on 21 January 2020).
FF, 2001. Fairtrade Foundation Annual Review 2000-2001. www.fairtrade.org.uk (Last accessed 21 March 2019).
Fichtl, E., 2007. The FT movement in historical perspective. Master Thesis. New School.
FLO, 2003-2004. Fairtrade Labelling Organization Annual Report. www.fairtrade.net (Last accessed 3 February 2019).
FLO, 2016-2017. Fairtrade Labelling Organization Annual Report https://annualreport16-17.fairtrade.net/en/ (Last accessed 3 February 2019).
FLO, 2017-2018. Fairtrade Labelling Organization Annual Report. https://annualreport17-18.fairtrade.net/en/ (Last accessed 5 January 2019).
Florkowski, W. J., Carew, R., He, S., 2008. British Columbia consumers' preferences for Italian wines: reputation and vintage effects on wine quality and prices, No. 725-2016-49492. [10.22004/ag.econ.44403]

Gale, F. 2019. Sustainability, in: The Palgrave handbook of contemporary international political economy. In Shaw, T., Mahrenbach, L., Modi, R., Yi-Chong, X. (eds). Basingstoke: Palgrave Macmillan, 517-33.

Gereffi, G., Garcia-Johnson, R., Sasser E. 2001. The NGO-industrial complex. Foreign Policy 125, 56-65.

Harris, S. 1989. Regional economic cooperation, trading blocs and Australian interests. Australian J. Int. Aff. 43 (2), 16-24.

Higgins, J. P. T., Green, S., 2011. Cochrane handbook for systematic reviews of interventions (5.1.0 edn, updated 2011). West Sussex: The Cochrane Collaboration.

Hughes, A., 2001. Global commodity networks, ethical trade and governmentality: organizing business responsibility in the Kenyan cut flower industry. Transactions of the Institute of British Geographers 26 (4), 390-406.

Karlin, A., 2018. Agriculture in the USSR. The Unz Review, Dec. https://www.unz.com/akarlin/agriculture-in-the-ussr/ (Last accessed 25th May 2020)

Kuttner, R., 1990. Managed trade and economic sovereignty. Proceedings of the Academy of Political Science 37 (4), 37-53.

IFTC, International Fair Trade Charter, 2018. The fair trade movement. https://fairtrade-advocacy.org/the-fair-trade-movement-2/ (Last accessed 31st May 2020).

Le Mare, A., 2008. The impact of FT on social and economic development: A review of the literature. Geogr. Compass 2 (6), 1022-1942.

Legarde, C., 2017. The agenda: Christine Legarde on globalisation. The World Economic Forum, The Economist.

Lévy, B., 2007. The interface between globalization, trade and development: Theoretical issues for international business studies. Int. Bus. Rev. 16 (5), 594-612.

Lloyd, P. J., 1998. Globalisation and competition policies. Weltwirtschaftliches Archiv 134 (2), 161-185.

Lunardi, O., 2017. Playing fair: how “alternative” fair trade and organic quinoa markets in Bolivia affect producer livelihoods. Doctoral thesis, University of Ottawa, Ontario, CA.

Lyon, S., 2015. Fair trade and indigenous communities in Latin America. In Raynolds, L. and Bennett, E. (Eds). Handbook of research on fair trade, chapter 24. Edward Elgar Publishing, 422-440. [https://doi.org/10.4337/9781783474622.00035]

MacDonald, K., 2007. Globalizing justice within coffee supply chains? FT, Starbucks and the transformation of supply chain governance. Third World Q. 28 (4), 793-812.

Macrotrends, 2020. Wheat prices: 40 years historical chart. https://www.macrotrends.net/2534/wheat-prices-historical-chart-data (Last accessed 15 May 2020).

Makita, R., Tsuruta, T. 2017. Social movements and commercial certification: a case from Thailand, in: Fair trade and organic initiatives in Asian agriculture. London, Routledge, 74-104.

Moberg, M., 2005. FT and eastern Caribbean banana farmers: Rhetoric and reality in the anti-globalization movement. Human organization, 4-15. DOI: 0018-7259/05/010004-12$1.70/1

Moher, D., Liberati, A., Tetzlaff, J. et al., 2009. Reprint - preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. Physical therapy 89 (9), 873-880.

Moore, G., 2004. The FT movement: Parameters, issues and future research. J. Bus. Ethics 53 (1), 73-86.

Murray, D. L., Raynolds, L. T., 2000. Alternative trade in bananas: obstacles and opportunities for progressive social change in the global economy. Agric. Hum. Values 17 (1), 65-74.

Murphy, S., Burch, D. Clapp, J., 2012. Cereal secrets: the world's largest grain traders and global agriculture. Oxfam Research Series, August.

Murphy-Gregory, H., 2018. Governance via persuasion: environmental NGOs and the social licence to operate. Environ. Pol. 27 (2), 320-340. DOI:10.1080/09644016.2017.1373429

Nelson, V., Pound, B., 2009. The last ten years: a comprehensive review of the literature on the impact of Fairtrade. Natural Resources Institute 1 (48).

Nelson, V., Morton, J. F., Chancellor, T. et al., 2010. Climate change, agriculture and Fairtrade: Identifying the challenges and opportunities. Natural Resources Institute Working paper. University of Greenwich, Kent.

Panayotou, T., 2000. Globalization and environment. CID Working paper series. Harvard.
Petticrew, M., Roberts, H., 2008. Systematic reviews in the social sciences: a practical guide. John Wiley & Sons.
Porter, M. E., Kramer, M. R., 2011. Creating shared value. Harvard Bus. (Jan-Feb), 1-17.
Raynolds, L., 2000, Re-embedding global agriculture: the International organic and FT movements, Agric. Hum. Values 17, 297-309.
Raynolds, L. T., 2017. Fairtrade labour certification: the contested incorporation of plantations and workers. Third World Q. 38 (7), 1473-1492.
Raynolds, L. T., Murray, D.,Wilkinson, J. 2007. Fair Trade: the challenges of transforming globalization. Routledge.
Raynolds, L. T., Murray, D., Taylor, P., 2004. Fair Trade coffee: building producer capacity via global networks. J. Int. Dev. 16 (8), 1109-1121.
Redfern, A. Snedker, P., 2002. Creating market opportunities for small enterprises: experiences of the FT movement. ILO-SEED Working paper, 30.
Renard, M.-C., 2003. Fair Trade: Quality, market and conventions. J. Rural Stud. 19 (1), 87-96.
Ribeiro-Duthie, A. C., 2019a. Circular Economy and Food Systems: mobilising pragmatic solutions to change organisational and consumer behaviour. Proceedings of the 4th International Conference on Public Policy (ICPP4), Montreal, CA.
Ribeiro-Duthie A. C., 2019b. SDG 8 Decent work and Economic growth, in: Franco I., Chatterji T., Derbyshire E., Tracey J. (Ed.) Actioning the global goals for local impact. Springer, 117-133. DOI: 10.1007/978-981-32-9927-6_9.
Ribeiro-Duthie, A. C.; Gale, F.; Murphy-Gregory, H., 2020. The innovation of the fair trade movement to foster sustainability aims. World Symposium on Sustainability Proceedings. Santa Catarina, Unisul. In RG&SA, v. 9, 996-1010.
Ruggie, J. G., 1994. Trade, protectionism and the future of welfare capitalism. J. Int. Aff. 48 (1), Summer, 1-11.
Sharma, R., Abidi, N., Khan, K., 2018. Comparison of conventional and fair trade systems on dimensions of sustainability: A study of basmati rice procurement in India. Int. J. Innovat. Sustain. Dev. 12 (4), 446-468.
Schmelzer, M., 2006. Is fair trade a neoliberal solution to market failures or a practical challenge to neoliberal trade and the free market regime in general? Research paper for Sociology, UC Berkeley, Spring.
Scherer, A. G., Palazzo, G., 2008. Globalization and corporate social responsibility. The Oxford handbook of corporate social responsibility. Oxford University Press, 413-431.
Schollenberg, L., 2012. Estimating the hedonic price for Fair Trade coffee in Sweden. Brit. Food J.
Sekimoto, S., Augustin-Jean, L., 2012. An export niche in the Philippines: The commodification of a speciality rice in Ifugao Province, in: Geographical indications and international agricultural trade. Palgrave Macmillan, London, 181-203.
Shapiro, C., 1983. Premiums for high quality products as returns to reputations. Q J Econ 98 (4), Nov, 659-679.
Smith, 2014. Cross-border innovation in South–North fair trade supply chains, in: Vazquez-Brust et al. (Ed). Collaboration for sustainability and innovation. Greening of Industry Networks Studies, 3. Springer, 87-105.
Tayleur, C., Balmford, A., Buchanan, G. et al., 2017. Where are commodity crops certified, and what does it mean for conservation and poverty alleviation? Biol. Conserv. 217 (C), 36-46.
Trinley, 2017. From grassroots to global: unintended consequences of a Bolivian quinoa economy. Master's Thesis, DePaul University, Chicago.
Udomkit, N., Winnett, A., 2002. Fair trade in organic rice: A case study from Thailand. Small Enterprise Dev. 13 (3), 45-53.
UNCTAD-United Nations Conference on Trade and Development, 1993.World Investment Report: Transnational Corporations and Integrated International Production. New York: UN.
Van den Broeck, G., Vlaeminck, P., Raymaekers, K. et al., 2017. Rice farmers' preferences for fairtrade contracting in Benin: Evidence from a discrete choice experiment. J. Clean. Prod. 165, 846-854. DOI: 10.1016/j.jclepro.2017.07.128.

Vent O., Koma, Y., Levine, C., Uphoff, N. 2015. Market Incentives for Ecofriendly SRI Rice Production in Cambodia, in: Shades of Green, 73-80.

Wheeler, D., 2001. Racing to the bottom? Foreign investment and air pollution in developing countries. J. Environ. Dev. 10 (3), 225-245.

Wilkinson, J., 2011. From FT to responsible soy: social movements and the qualification of agrofood markets. Environ. Plan. A 43.

Winkel, T., Bertero, H., Bommel, P. et al., 2012. The Sustainability of quinoa production in Southern Bolivia: From misrepresentations to questionable solutions. Comments on Jacobsen (2011, J. Agron. Crop Sci. 197: 390-399). Journal of Agron. Crop Sci. 198 (4), 314-319.

Xavier, L. H., Giese, E. C., Ribeiro-Duthie, A. C., Lins, F. A. F., 2019. Sustainability and the Circular Economy: A theoretical approach focused on e-waste urban mining. Resources Policy DOI: 10.1016/j.resourpol.2019.101467.

8. Appendix

Mainstream FT Organisations' Reports reviewed:

FLO - Fairtrade International
2007 Fairtrade Monitoring-Scope-Benefits Web Report
2008 Fairtrade Monitoring-Scope-Benefits Web Report
2011 Fairtrade Monitoring-Scope-Benefits Web Report
2012 Fairtrade Monitoring-Scope-Benefits Web Report
2013 Fairtrade Monitoring-Scope-Benefits Web Report
2014 Fairtrade Monitoring-Scope-Benefits Web Report
2015 Fairtrade Monitoring and Impact-Web Report
FF - Fairtrade Foundation
Annual Report and Financial Statements 2000-1
Annual Report and Financial Statements 2001-2
Annual Report and Financial Statements 2002
Annual Report and Financial Statements 2003
Annual Report and Financial Statements 2004
Annual Report and Financial Statements 2005
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Annual Report and Financial Statements 2017
Annual Review 2007-2008
Annual Review 2008-2009
Annual Review 2009-2010
Annual Review 2012-2013
Annual Impact Report 2013-2014
WFTO - World FT Organization
IFAT Annual Report 2007
WFTO Annual Report 2008
WFTO Annual Report 2008_Final
WFTO Annual Report 2009
WFTO Annual Report 2010
WFTO Annual Report 2011
WFTO Annual Report 2012
WFTO Annual Report 2013
WFTO Annual Report 2015
WFTO Annual Report 2016
WFTO Annual Report 2017

FT USA
2001 Annual Report
2002 Annual Report
2004 Annual Report Transfair USA
2007 Annual Report
2008 Annual Report
2013 Annual Report

Fig. 1. Ascending trendline of FAIRTRADE revenues, in billions of Euros. Built by authors, source: FLO Reports 2003-2004 to 2017-2018.

Fig. 2. Selection criteria for this systematic literature review and total findings and removals.

Fig. 3. Number of selected literature items addressing the respective staples within a FT model.

Fig. 4. Timeline compiling FT organisations' reference and approach to staple foods. Synthesised by authors, source: FLO; FF; WFTO; and FT USA reports. *No indication that maize was FT certified.

Table 1.

FAIRTRADE	When written in block capitals, the term refers to the trademark used as a label on certified products from Fairtrade International.
Fairtrade International	This is the Non-Governmental Organisation that manages the FAIRTRADE label. Launched in 1997, it is headquartered in Bonn, Germany, and adopted this brand name in 2002. The organisation is a multi-stakeholder association of 23 member organisations composed of 3 producers' networks and 20 national organisations.
Fairtrade Labelling Organisation (FLO)	This is the original name of Fairtrade International. Today, it is the formal name for the entity that sets FAIRTRADE standards and provides support for producers to meet such standards.
World Fair Trade Organization (WFTO)	Launched in 2008, WFTO is a membership organisation that includes organisations and individuals from 75 countries. It was formerly called IFAT (International Federation of Alternative Trade), which mainly traded handcrafts. Today, WFTO trades a broader range of products based on the 10 principles of fair trade.
Fair Trade USA	An offshoot of Fairtrade International that was formed around 2011. The first letters of both terms are capitalised and followed by USA and this constitutes the organisation's brand name – which uses the organisation *Fair Trade Certified* as its certifying body. Fair Trade Certified is Fair Trade USA's label and the organisation sets its own fair trade principles.
fair trade	*Fair trade (no capitals except at the start of a sentence)* is how the overall movement is referred to in this article (instead of fair-trade). Fair trade encompasses Fairtrade, Fair Trade USA, FLO, WFTO and related organisations that abide by ethical consumption principles.

Table 2.

Company	Staple Food	Country of Origin	Extra Data
Archer Daniels Midland Co.	Grains	United States	Trades over 40 million tonnes of grains and oil seeds and is the world's third largest processor of corn, wheat, cocoa, oil seed.
Bunge Group	Soybeans Wheat Maize	Netherlands	World's largest producer of soybeans. Trades 30 million tonnes of soybeans, wheat, maize and other grains.
Cargill	Grain Oilseeds Maize Poultry	United States It holds offices in 66 countries	World's largest food trader, in 2003 a volume of 50 million tonnes of cereals and oilseeds was processed. The world's largest maize trader. Process of grains and beef in Australia; and soy in Brazil.
Louis Dreyfus	Rice Soy Orange Oilseeds	France Merchandising arm is headquartered in the Netherlands	Family firm that holds 15% of global market trade, is the world's leading merchandiser of cotton and rice. It produces 1m tons of soy for animal meal.

Table 3.

Staple Foods	References	Type of Literature	Methods	Disciplinary Areas
Rice; Wheat; and other non-staples	Barker, 2007. The rise and predictable fall of globalized industrial agriculture. *The International Forum on Globalization* (IFG), January. San Francisco.	Report	Case Study	**i; ii; iv**
Rice	Becchetti et al., 2012. Market access, organic farming and productivity: The effects of FT affiliation on Thai farmer producer groups. *Australian Journal of Agricultural & Resource Economics* 56(1), 117-140.	Peer-review Academic Journal	Impact Assessment through Econometrics	**i; iii; iv**
Rice	Becchetti et al., 2011. Virtuous interactions in removing exclusion: The link between foreign market access and access to education. *Journal of Development Studies*, 47(9), 1431-1454.	Peer-review Academic Journal	Impact Assessment through Memorable event	**iii; iv**
Quinoa	Cáceres et al., 2007. Fair trade and quinoa from the southern Bolivian Altiplano, in: Raynolds et al. (Eds). *Fair Trade: The challenges of transforming globalization*, chapter 11. London, Routledge, 196-215.	Book chapter	Case Study; Historical Analysis; Observational Study; Comparative Analysis	**i; iii; iv**
Quinoa	Carimentrand and Ballet, 2010. When fair trade increases unfairness: The case of quinoa from Bolivia. *FREE (Fonds pour la Recherche en Ethic Economique) Cahier* (5).	Report	Case Study	**iii; iv**
Quinoa	Carimentrand et al., 2015. Quinoa trade in Andean countries: Opportunities and challenges for family, in: *State of the Art Report on Quinoa in the World in 2013*, 330-342.	Report chapter	Case Studies Review; Observational Study; Comparative Analysis	**ii; iii; iv**
Rice	Carlisle, 2016. The Terrace Keepers. *Stanford Social Innovation Review*, 14(4), 13-14.	Periodical	Case Study	**iii; iv**
Potato	Colantuoni et al., 2016. Heterogeneous Preferences for Domestic Fresh Produce: Evidence from German and Italian early potato markets. *Agribusiness*, 32(4), 512-530.	Peer-review Academic Journal	Discrete Choice Experiment	**i; iii; iv**
Staples in general	Howell, 2007. Sustainable consumption and global trade: Complementary or contradictory? *International Journal of Interdisciplinary Social Sciences*, 1(5), 137-144.	Peer-review Academic Journal	Desk-based Eco-Footprint Analysis	**iv; v**
Rice	Jolly and Arora, 2014. Institutional work and poverty reduction: Case of smallholder cultivation in Northern India. *Academy of Management Annual Meeting Proceedings*. Vol. 2014(1).	Conference paper	Case Study	**iv; v**
Quinoa	Lunardi, 2017. *Playing Fair: How "Alternative" fair trade and organic quinoa markets in Bolivia affect producer livelihoods*. Doctoral thesis, University of Ottawa, Ontario, CA.	Thesis	Case Study; Observational Study (Ethnographic)	**iv; v**
Quinoa; and other non-staples	Lyon, 2015. Fair trade and indigenous communities in Latin America, in: Raynolds and Bennett (Eds*). Handbook of Research on Fair Trade*, chapter 24. Chetelham Glos, Edward Elgar Publishing, 422-440.	Book chapter	Desk-based Comparative Analysis	**ii; iv**
Rice	Makita and Tsuruta, 2017. Social movements and commercial certification: A case from Thailand, in: Makita and Tsuruta (Eds). *Fair trade and organic initiatives in Asian agriculture*. London, Routledge, 74-104.	Book chapter	Case Study	**i; ii; iii; iv**

Rice; and other non-staples	Nelson et al., 2010. Climate change, agriculture and Fairtrade: Identifying the challenges and opportunities. *Natural Resources Institute (NRI) Working paper*. University of Greenwich, Kent.	Report	Desk-based Analysis	**ii; iii**
Quinoa	Ofstehage, 2012. The construction of an alternative quinoa economy: Balancing solidarity, household needs, and profit in San Agustín, Bolivia. *Agriculture and Human Values*, 29, 441-454.	Peer-review Academic Journal	Case Study; Observational Study (Ethnographic)	**i; iii; iv**
Rice	Panyakul, 2012. Climate change adaptation through agro-social enterprise: Green Net's experiences in Thailand. *Asian Journal of Environment and Disaster Management*, 4(4), 1-16.	Peer-review Academic Journal	Case Study; Observational Study; Action Research	**i; ii; v**
Soy	Potts et al., 2014. Soybean market, in: *The State of Sustainability Initiatives Review*, 253-274.	Report chapter	Desk-based Comparative Data Analysis	**i; iii; v**
Rice	Sekimoto and Augustin-Jean, 2012. An export niche in the Philippines: The commodification of a speciality rice in Ifugao Province, in: *Geographical Indications and International Agricultural Trade*. Palgrave Macmillan, London, 181-203.	Book chapter	Case Study	**ii; iii; iv; v**
Rice	Sharma et al, 2018. Comparison of conventional and fair trade systems on dimensions of sustainability: A study of basmati rice procurement in India. *International Journal of Innovation and Sustainable Development*, 12(4), 446-468.	Peer-review Academic Journal	Factor Analysis; Case-Control Study; Comparative Analysis	**i; ii; iii**
Rice	Smith, 2014. Cross-border innovation in South–North fair trade supply chains: The opportunities and problems of integrating fair trade governance into Northern public procurement, in: Vazquez-Brust et al. (Eds). *Collaboration for sustainability and innovation: A role for sustainability driven by the Global South?* Greening of Industry Networks Studies, 3. Springer, Dordrecht, 87-105.	Book chapter	Case Study; Evidence-based Observational Study	**i; iii; iv**
Rice	Sondh, 2018. *Is Fairtrade leading to sustainable changes in the value chain?* MSc Dissertation, Wageningen University, The Netherlands.	Thesis	Case Study	**iii**
Soy; and other non-staples	Tayleur et al., 2017. Global coverage of agricultural sustainability standards, and their role in conserving biodiversity. *Conservation Letters*,10(5), 610-618.	Peer-review Academic Journal	Environmental and Certification Comparative Analysis	**i; ii; v**
Rice	Thavat, 2011. The tyranny of taste: The case of organic rice in Cambodia. *Asia Pacific Viewpoint*, 52(3), 285-298.	Peer-review Academic Journal	Case Control Study; Controlled Observational Study (Ethnographic)	**i; iii; iv**
Quinoa	Trinley, 2017. *From grassroots to global: unintended consequences of a Bolivian quinoa economy*. Master's Thesis, DePaul University, Chicago.	Thesis	Comparative Historical Analysis	**i; ii; iii; iv**
Rice	Udomkit and Winnett, 2002. Fair trade in organic rice: A case study from Thailand. *Small Enterprise Development* 13(3), 45-53.	Peer-review Academic Journal	Experimental with Control Group; Evidence-based Comparative Analysis	**i; ii; iii; iv**
Rice	Van den Broeck et al., 2017. Rice farmers' preferences for fairtrade contracting in Benin: Evidence from a discrete choice experiment. *Journal of Cleaner Production*. Nov, 165, 846-854.	Peer-review Academic Journal	Choice Experiment using Econometrics	**iii; iv**

Rice; and other non-staples	Vent et al., 2015. Market Incentives for Ecofriendly SRI Rice Production in Cambodia, in: *Shades of Green: Multi-stakeholder initiatives to reduce the environmental footprint of commercial agriculture*. Greening Export Agriculture in East and South East Asia, 73-80.	Report	Case Study; Evidence-based Comparative Analysis	**i; ii; iii**
Quinoa	Winkel et al., 2012. The Sustainability of quinoa production in Southern Bolivia: From misrepresentations to questionable solutions. Comments on Jacobsen (2011, J. Agron. Crop Sci. 197: 390-399). *Journal of Agronomy and Crop Science*, 198(4), 314-319.	Peer-review Academic Journal	Comparative Analysis	**i; ii; iii; iv**
Soy	Wilkinson, 2011. From fair trade to responsible soy: Social movements and the qualification of agrofood markets. *Environment and Planning A*, 43(9), 2012-2026.	Peer-review Academic Journal	Comparative Analysis	**ii; iv**

Table 1.

Terminological clarification: *Fairtrade, Fair Trade, fair-trade or fair trade?*

Table 2.

Major companies in the staple foods market.

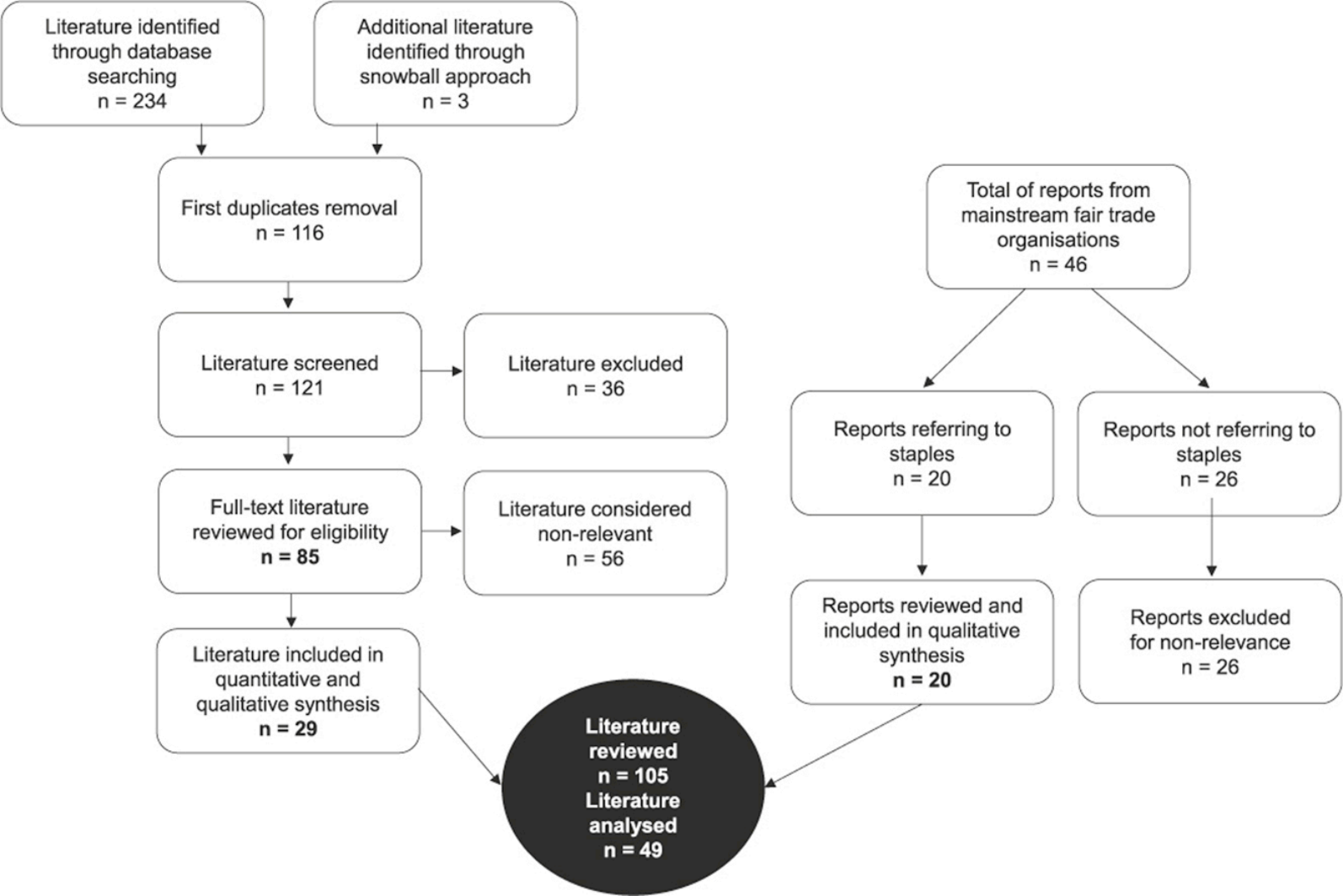
Source: UN Food and Agriculture Organisation (FAO 2003), Murphy et al. (2012).

Table 3.

Selected literature: staple foods, reference, type of literature, methodological approach, and disciplinary areas of the findings.

8. Appendix

Mainstream FT Organisations' Reports reviewed: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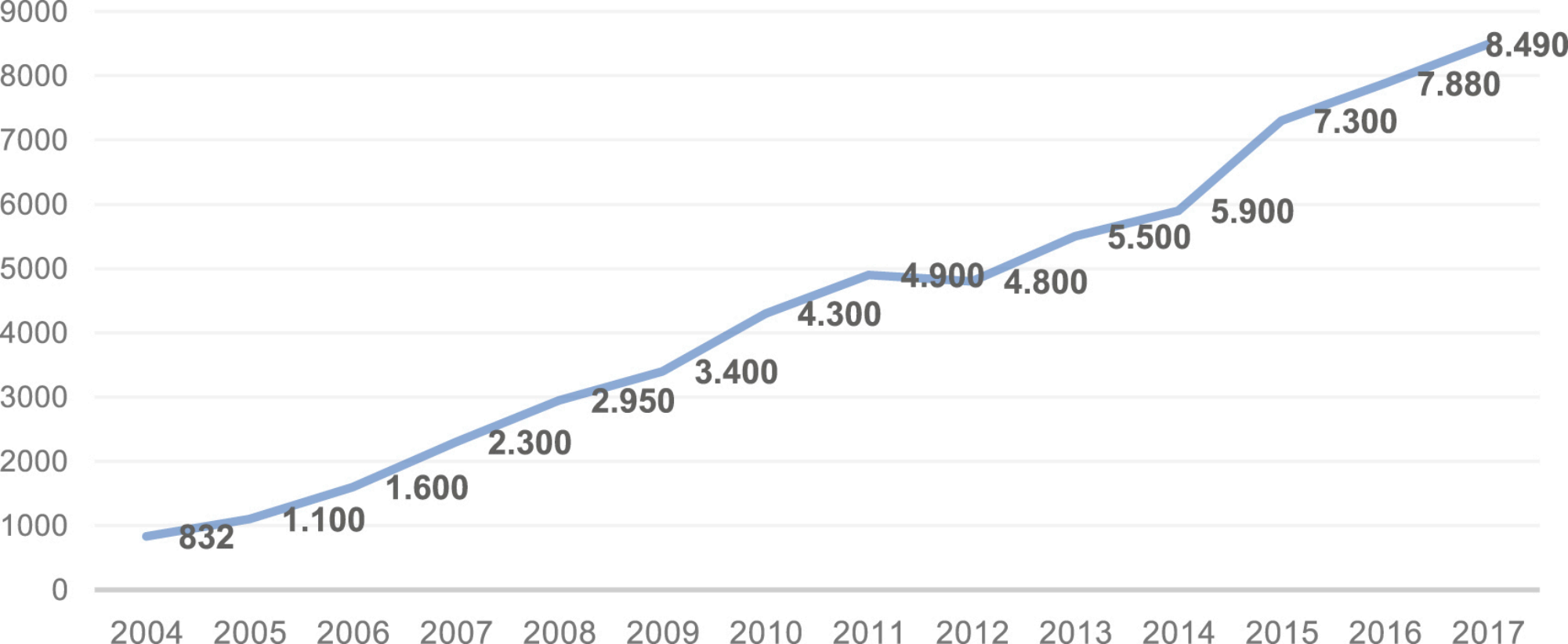
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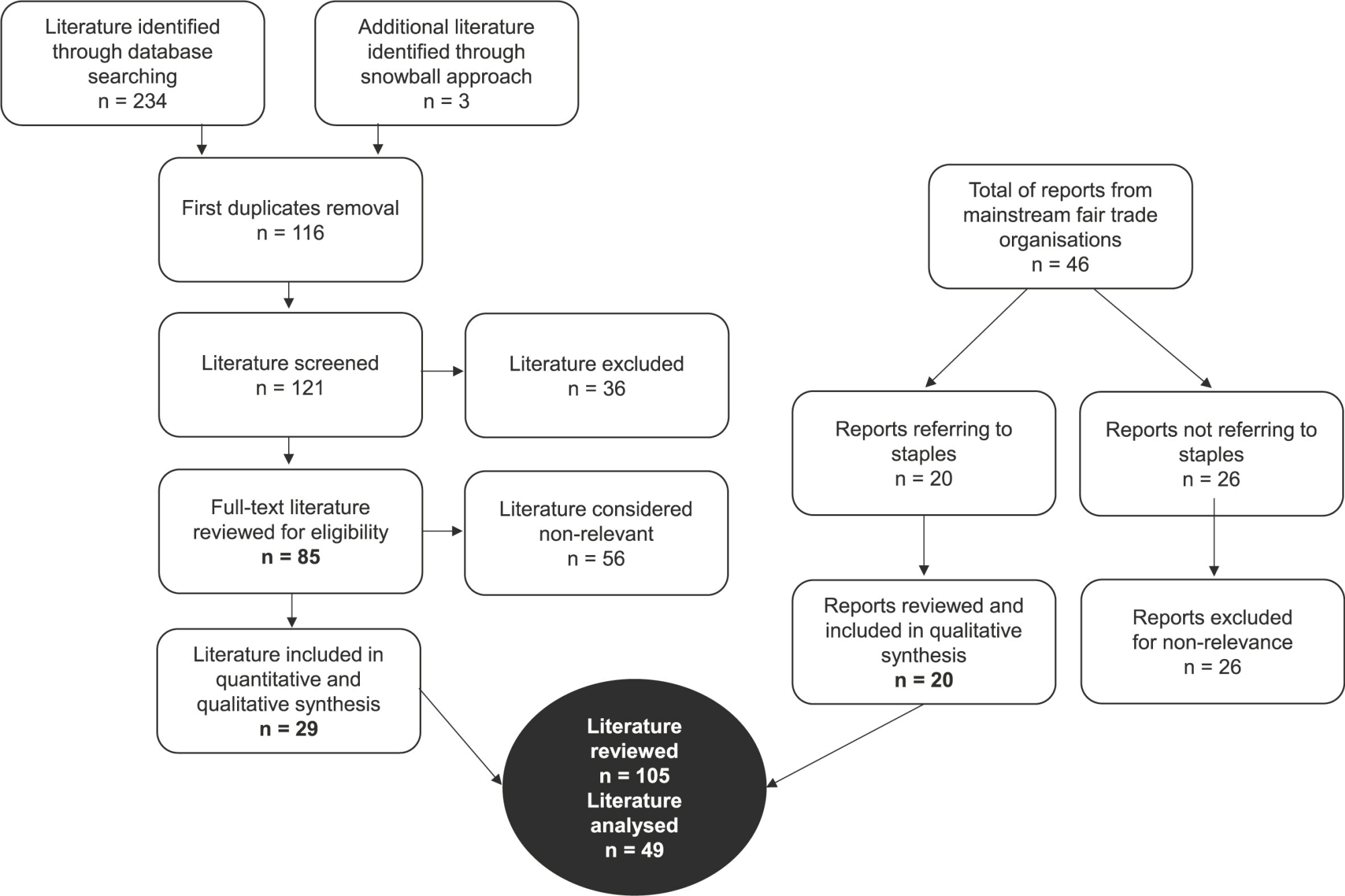
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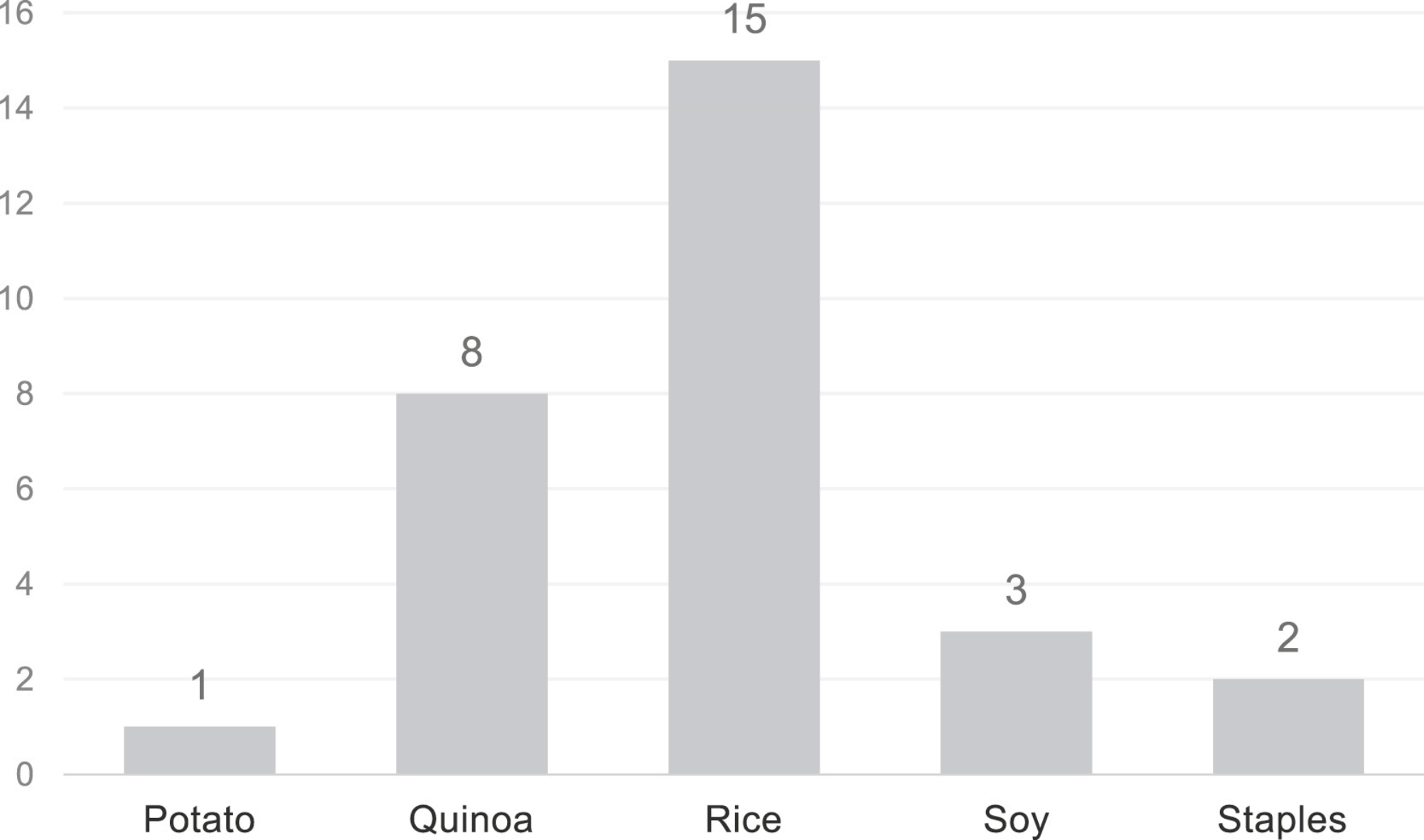
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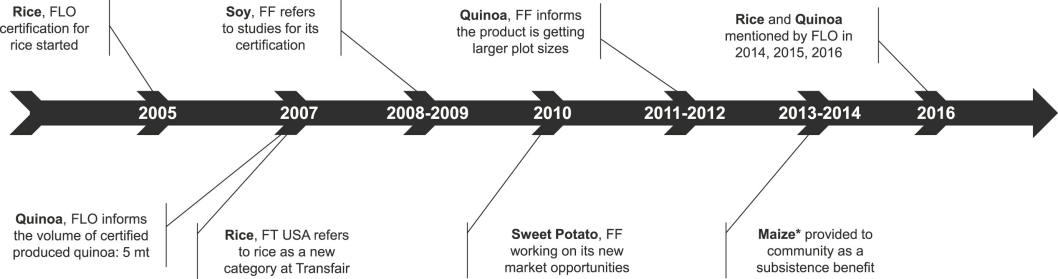
Rice, FLO certification for rice started
Soy, FF refers to studies for its certification
Quinoa, FF informs the product is getting larger plot sizes
Rice and **Quinoa** mentioned by FLO in 2014, 2015, 2016
2005
2007
2008-2009
2010
2011-2012
2013-2014
2016
Quinoa, FLO informs the volume of certified produced quinoa: 5 mt
Rice, FT USA refers to rice as a new category at Transfair
Sweet Potato, FF working on its new market opportunities
Maize* provided to community as a subsistence benefit

Conflict of Interest Statement:

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

- Fair trade (FT) aims at attaining sustainable development through ethical consumption to promote social change
- Given the role of staple foods in the global population diet, is there a role for staples in the FT movement?
- This is the first systematic review addressing a gap in the literature relating FT and staple foods, confirmed by exiguous studies and practices found
- Main topics identified such as supply, demand, governance, sustainability, and globalisation are analysed to contribute to more sustainable consumption and production practices within food systems